Remarks/Arguments

Claim Amendments

Claim 1 has been cancelled and Claim 4 has been amended to recite the elements of Claim 1. In addition, Claim 4 has been amended to recite the heat sink assembly and lens protecting the illumination source from direct physical intrusion. This is shown in the figures, for example, Figure 7A shows that direct access to the illumination source is not possible through the lens, through the baffle, or through the remainder of the heat sink assembly. Applicants do not intend to give rise to a presumption of surrender. No new matter has been added.

Rejection of Claims 1-14 under 35 U.S.C. 112, First Paragraph

The Examiner rejected Claims 1-14 under 35 U.S.C. 112, first paragraph as failing to comply with the written description requirement. Specifically, the Examiner asserted that the originally filed specification, drawings, and claims failed to show an illuminated source fully enclosed by a heat sink assembly. Claim 4 has been amended to recite at least some of the limitations of Claim 1. However, the element of a fully enclosed illuminated source is not recited in Claim 4. Therefore, the rejection of Claim 4 is moot. The rejection of Claims 2, 3, and 5-14, dependent from Claim 4, also is moot. Applicants courteously request that the rejection be removed.

Rejection of Claims 1-3 under 35 U.S.C. §103(a)

The Examiner rejected Claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,295,052 (Chin). Applicants respectfully traverse the rejection.

Claim 1 has been cancelled and Claim 4 has been amended to recite most of the elements in previously presented Claim 1. Therefore, Applicants' arguments are directed to Claim 4.

Chin does not teach an illumination source protected from direct physical intrusion

Claim 4 recites: "said heat sink assembly and said lens are arranged to protect said illumination source from direct physical intrusion." As shown in Figure 7A, there is no direct or linear path from outside of the microscope through the lens and heat sink assembly, which includes the baffle, to the light source. For example, an object thrust against the baffle plate orthogonal to the plate cannot penetrate past baffles 57. An object inserted through openings 58 at an angle is diverted by baffles 57 away from the illumination source.

In contrast, significant portions of the illumination source in Chin are exposed to direct contact. For example, as shown in Figure 1 of Chin, there is a direct, linear path between the sinks, i.e. sink 38, to light source 34. In fact, the leader line for reference designator 34 in Figure 1 points directly to such an area. Chin does not protect the light source from intrusion.

Chin does not teach, suggest, or motivate all the elements of Claim 4.

Chin teaches against protecting the light source from direct physical intrusion

Chin's arrangement requires that the light source always be open to direct physical intrusion. For example, even if heat sinks 36 and 38 are pushed together axially (for example, sink 36 is moved right in Figure 1 until it contacts sink 38), there remains direct access to the light source between the fins of the heat sinks. "A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997)."

Modifying Chin to protect the light source would change the principle of operation of Chin

The fundamental principal of operation for Chin is the movement of air about the light source. If the light source were fully encased (protected from direct intrusion), this principal of operation would be altered. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." As quoted in MPEP 2143.01.

Modifying Chin to protect the light source would render Chin unsatisfactory

The cooling function in Chin is dependent on the flow of air around the light source, between the heat sinks, and around the heat sink fins. Modifying Chin so that the heat sinks fully encase the light source (protect from direct physical intrusion) would drastically alter the required configuration of components and subsequent air movement. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)." As quoted in MPEP 2143.01.

For all the reasons noted above, Claim 4 is patentable over Chin. Claims 2 and 3, dependent from Claim 4 enjoy the same distinction with respect to Chin. Applicants courteously request that the rejection be removed.

Rejection of Claims 4-12, 14-24, 26-34, 36-43, and 46-50 under 35 U.S.C. §103(a)

The Examiner rejected Claims 4-12, 14-24, 26-34, 36-43, and 46-50 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,295,052 (Chin) in view of U.S. Patent No. 5,076,660 (Messinger). Applicants respectfully traverse the rejection.

Claim 4

Applicants have shown that Claim 4 is patentable over Chin. Messinger does not cure the defects of Chin with respect to Claim 4. Specifically, Messinger fails to teach: "said heat sink assembly and said lens are arranged to protect said illumination source from direct physical intrusion."

Messinger is not analogous to the present invention

Messinger is teaching a light source for fiberoptic illumination. Fiberoptic illumination is not analogous to the microscope recited in Claim 4.

Messinger's baffles do not occlude the emanation of light from the inlet

Claim 4 recites: "...said baffle is operatively arranged to deflect air entering said microscope via said inlet and to occlude the emanation of light from said illumination source through said air inlet..."

In the Office Action mailed December 14, 2006 (page 7, last full paragraph), the Examiner admitted that inlet 11 of Messinger did not read on the inlet recited in the present claims and directed the rejection to air inlet 9. Further, the Examiner asserted that the structures shown to the right of lamp 1 in Fig. 1 of Messinger (hereafter referred to as partitions) and baffles 19 occlude the emanation of light from inlet 9. However, it is clear that significant amounts of light pass through the partitions and baffles to enter the passageway to inlet 9 (beginning on the right hand side of the partitions in Figure 1). The occlusion of light from inlet 9 is a result of the configuration of the passage between the partitions and the inlet and the changes in direction for a light beam dictated by this configuration. For example, light streaming past the partitions and baffles must make three 90 degree turns in the passageway in order to exit through inlet 9. Thus, it is the passageway, not the partitions and baffles, that occludes light from inlet 9. Alternately stated, if inlet 9 were placed directly to the right of the partitions, that is, light was not required to traverse the passageway, the partitions and baffles 19 would not occlude light from reaching inlet 9 and emanating from inlet 9.

Messinger's partitions and baffles are not proximate the air inlet

Claim 4 recites: "a heat sink assembly with a baffle located proximate said air inlet;" The plain meaning of proximate is given by The Merriam-Webster Dictionary as "very near." However, some consideration can be given to the context in which the term is used. The baffle assembly recited in Claim 4 is disposed directly on top of the air inlet as shown in Figures 5 through 7b of the present application. In contrast, assuming *arguendo* that Messinger's partitions and baffles are analogous to the baffle recited in Claim 4, the partitions and baffles are no where near inlet 9. In fact, within the context of Messinger's receptacle, the partitions and baffles are nearly as far from the inlet as is possible. Further, Messinger necessarily must separate the partitions and baffles from the inlet to the greatest degree possible, since the degree of this separation is directly related to the efficiency of the passageway in occluding light. That is, the further the partitions and baffles are from the inlet (the longer the passageway), the more effectively the passageway occludes light.

Messinger teaches against locating partitions and baffles proximate the air inlet

Assuming *arguendo* that Messinger's partitions and baffles are analogous to the baffle recited in Claim 4, as noted above, Messinger relies on the distance between the partitions and baffles and air inlet 9 to occlude light. That is Messinger teaches against locating the partitions and baffles proximate the air inlet. "A *prima facie* case of obviousness can be rebutted if one of the cited references teaches away from the claimed invention. See *In re Geisler*, 43 U.S.P.Q. 2d 1362, 1366 (Fed. Cir. 1997)."

Modifying Messinger would change the principle of operation of Messinger

Messinger clearly relies on the length of the passageway between the partitions and baffles and inlet 9 to diffuse and occlude light. For example, significant amounts of light pass through the partitions and baffles into the passageway. If the air inlet were moved proximate the partitions, for example, in the vicinity of the leader line for reference designator 20 in Fig. 1, the principal of using the passageway would not longer be viable. "If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)." As quoted in MPEP 2143.01.

Modifying Messinger would render Messinger unsatisfactory

Messinger clearly relies on the length of the passageway between the partitions and baffles and inlet 9 to diffuse and occlude light. It is clear that significant amounts of light pass through the partitions and baffles into the passageway. If the air inlet were moved proximate the partitions, for example, in the vicinity of the leader line for reference designator 20 in Fig. 1, the light would no longer "bounce" between the passageway walls and would stream directly out of the inlet. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)." As quoted in MPEP 2143.01.

Chin in view of Messinger fails to teach, suggest, or motivate all the elements of Claim 4. Therefore, Claim 4 is patentable over Chin in view of Messinger. Claims 5-12 and 14, dependent from Claim 4, enjoy the same distinction with respect to Chin and Messinger. Applicants courteously request that the rejection be removed.

Claim 15

Claim 15 recites: "a fixed baffle assembly located proximate said air inlet and operatively arranged to divert air entering said microscope via said inlet and to occlude the emanation of light from said microscope through said air inlet."

Claim 4 recites a baffle and the limitations noted above. Applicants have shown that Chin in view of Messinger fails to teach, suggest, or motivate the preceding elements of Claim 4. Therefore, Claim 15 is patentable over Chin in view of Messinger. Claims 16-24 and 26-29, dependent from Claim 15, enjoy the same distinction from the cited references. Applicants courteously request that the rejection be removed.

Claim 30

Claim 30 recites: "a fixed baffle located proximate an air inlet of said microscope and operatively arranged to deflect air that enters said microscope via said inlet, wherein said microscope further comprises an illumination source and said baffle occludes the emanation of light from said illumination source through said inlet."

Claim 4 recites a baffle and the limitations noted above. Applicants have shown that Chin in view of Messinger fails to teach, suggest, or motivate the preceding elements of Claim 4. Therefore, Claim 30 is patentable over Chin in view of Messinger. Claims 31-34, 36-43, and 46-50, dependent from Claim 30, enjoy the same distinction from the cited references. Applicants courteously request that the rejection be removed.

Rejection of Claims 13, 25, 44, and 45 under 35 U.S.C. §103(a)

The Examiner rejected Claims 13, 25, 44, and 45 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,295,052 (Chin) in view of U.S. Patent No. 5,076,660

(Messinger) as applied to Claims 5, 17, and 36, and further in view of U.S. Patent No. 6,698,200 (Rauen). Applicants respectfully traverse the rejection.

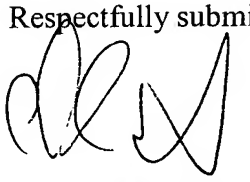
Applicants have shown that Claims 4, 15, and 30 are patentable over Chin in view of Messinger. Rauen teaches a thermodynamic engine and fails to cure the defects of Chin and Messinger with respect to Claims 4, 15, and 30. Therefore, Claim 13, Claim 25, and Claims 44 and 45, dependent from Claims 4, 15, and 30, respectively, enjoy the same distinction with respect to the cited references.

Applicants courteously request that the rejection be removed.

Conclusion

Applicant respectfully submits that all pending claims are now in condition for allowance, which action is courteously requested.

Respectfully submitted,



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